

Appln. No. 09/216,378
Amendment dated May 6, 2008
Reply to Office Action mailed February 6, 2008

REMARKS

Reconsideration is respectfully requested.

Claims 1 through 5, 7 through 17, 21, 39, 40, 41 and 43 through 45 remain in this application. Claims 6, 18 through 20 and 22 through 38 have been cancelled. No claims have been withdrawn or added.

Initially, it was noticed that the previous amendment, which added claims, skipped a claim numbered "40". The claims previously numbered 41 through 46 have been renumbered as claims 40 through 45, respectively.

The Examiner's rejections will be considered in the order of their occurrence in the Office Action.

Paragraph 2 of the Office Action

Claims 1, 13, 16 and 42 have been rejected under 35 U.S.C. §112 (second paragraph) as being indefinite.

The above amendments to the claims are believed to clarify the requirements of the rejected claims, especially the particular points identified in the Office Action.

Withdrawal of the §112 rejection of claims 1, 13, 16 and 42 is therefore respectfully requested.

Paragraph 5 of the Office Action

Claims 1 through 5, 7 through 11, 13, 15 through 17, 21, 39 and 41 through 46 have been rejected under 35 U.S.C. Section 103(a) as being unpatentable over Eatwell in view of Andrea.

Claim 12 has been rejected under 35 U.S.C. Section 103(a) as being unpatentable over Eatwell as modified by Andrea as applied to claim 8 above, and further in view of Roach.

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Claims 11 and 14 have been rejected under 35 U.S.C. Section 103(a) as being unpatentable over Eatwell as modified by Andrea as applied to claim 8 above, and further in view of Lambrecht.

Claim 1, particularly as amended, requires "the digital signal processor *being connected to a standard headphone compatible audio output connection* integrated on the housing such that *the mixed signal is available at the audio output connection*" and "*wherein the mixed signal reproduced by headphones connected to the audio output connection reduces noise perceived by a user wearing the headphones and listening to the mixed signal through the headphones*". As noted previously, the requirements of the claims emphasize the ability of the invention to utilize the elements integral to an otherwise conventional portable computer and conventional headphones without requiring specialized hardware for the computer or specialized headphones to be able to utilize the invention.

It is conceded in the rejection of the Office Action that:

Eatwell does not explicitly teach that the digital signal processor configured to mix the noise cancellation signal with an audio signal provided from a desired source, the digital signal processor being connected to a standard headphone compatible audio output connection integrated on the housing to reduce noise perceived by a user of a headphone connected to the standard headphone compatible audio output connection.

It is then asserted that:

However, Andrea teaches a digital signal processor (see fig. 7) coupled to the noise cancellation module and configured to mix (+ sign) the noise cancellation signal with an audio signal (reads on speech) provided from a desired source (intercom system), the digital signal processor being connected to a standard headphone compatible audio output connection integrated on the housing to reduce noise perceived by a user of a headphone connected to the standard headphone compatible audio output connection (see figs 7-11 and col. 14 line 1-68).

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However, it is submitted that neither the Eatwell patent nor the Andrea patent discloses “the digital signal processor *being connected to a standard headphone compatible audio output connection integrated on the housing such that the mixed signal is available at the audio output connection*” as required by claim 1, as well is similarly but not identically required by claims 8, 13, 16 and 41. More specifically, it is submitted that the Andrea patent would not lead one of ordinary skill in the art to the requirement of “a standard headphone compatible audio output connection” as required by claim 1. Instead, the Andrea patent shows and discusses all manner of specialized headphones that incorporate microphones as well as speakers, and thus the headphones would be understood by one of ordinary skill in the art to require a specialized connection, and one of ordinary skill in the art would not expect the headphones to include “a standard headphone compatible audio output connection”.

Looking to the referenced portion of the Andrea patent, Figures 7 through 10 all show headsets with integral microphones required to sense and transmit back to the circuitry the sound sensed at the headphones. It is submitted that this showing is inconsistent with “a standard headphone compatible audio output connection” being employed by Andrea. Further, at column 14, lines 1 through 68, a number of headphone embodiments are discussed, none of which suggest that a “a standard headphone compatible audio output connection” is employed. See, for example, col. 14, lines 12 through 29, where it is state that (emphasis added):

FIG. 7 depicts an overall system of the present invention. As noted previously, the present invention is especially well suited for use in a high noise environment, e.g., as part of a communications system such as an intercom, telephone, etc. in any typical high noise environment. The audio interface (see, for example, FIGS. 4, 8, 9, 10) preferably includes a sensor to sense the ambient noise, a sensor to sense the signal in the ear canal, and a speaker to produce the local anti-noise and received speech, all resident in a headset, and the necessary analog signal conditioning circuitry to insure optimum quantization of the signal in the Digital Signal Processor (DSP). The Digital Signal Processor estimates the noise, and removes an estimate

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from the speech plus noise. The system configuration in the transmit and receive modes are illustrated in the previously described FIGS. 6 and 5, respectively.

This portion of the text teaches that the headphone includes a sensor, as well as a speaker, and would not suggest that a "standard headphone compatible audio output connection" could be used. Further, Andrea states at col. 14, lines 43 through 53 that (emphasis added):

An alternative headset configuration is shown in FIG. 10. In this diagram the feedback microphone 70' is not used as a transmit microphone; instead, a boom mike 60' is used. In this configuration reference sensors 60' are positioned externally, and boom microphone 60" can also be used as an additional reference sensor by using standard dual diaphragm noise canceling elements. This configuration allows the user to have an "over the ear" fit instead of "in the ear" if desired.

Again, this description can only suggest to one of ordinary skill in the art that a "standard headphone compatible audio output connection" is not used. Also, the headset shown in Figure 9 suggests a fairly complex connection is required that cannot be handled by a "standard headphone compatible audio output connection".

Thus, the allegedly obvious combination of Eatwell and Andrea would not lead one of ordinary skill in the art to the requirements of claim 1 (as well as the other independent claims), and these requirements permit the use of conventional headphones (rather than specialized headphones with a specialized connection) and a convention computer.

It is therefore submitted that the cited patents, and especially the allegedly obvious combination of Eatwell, Andrea, Roach and Lambrecht set forth in the rejection of the Office Action, would not lead one skilled in the art to the applicant's invention as required by claims 1, 13, 16 and 42.

Withdrawal of the §103(a) rejection of claims 1 through 5, 7 through 17, 21, 39 and 41 through 45 is therefore respectfully requested.

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CONCLUSION

In light of the foregoing amendments and remarks, early reconsideration and allowance of this application are most courteously solicited.

Respectfully submitted,

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